

### 3.3 Recycled Paper Making: “Kind Words for Mothers and Mother Earth

Through mixed-age collaboration, this two hours STEAM program aims to develop empathy and connectedness of the 1st grade students by collaborating with 2nd or 3rd grades during the intricate paper-making process. Papermaking with kids is a fun and creative activity that can be done with common household items! Making paper teaches children how one of our most commonly used materials - PAPER - is made, and it’s also a fun sensory project for kids of all ages.

#### Basic Information Sheet

| Age group                                                                   | Student number                     | Duration         | Number of stages | Subjects connection and relevance  |
|-----------------------------------------------------------------------------|------------------------------------|------------------|------------------|------------------------------------|
| Mixed group 1 <sup>st</sup> grade with support of 2/3rd grade inmixed group | whole class in teams of 8 students | 80 - 120 minutes | 5 stages         | Environmental Science and Literacy |

#### STEAM Event Summary

This STEAM project sharpens emotional awareness as children use choose feeling words, and draft a gratitude message that is kind, specific, and respectful. By identifying and solving "production problems" - such as sheets being too thin or too wet - students build resilience and practical problem-solving skills. The station-rotation technique fosters self-regulation and responsibility, requiring teams to manage their own time, tools, and environmental cleanup. It encourages critical thinking by linking personal "inputs" (kind words) and environmental "inputs" (recycling) to their broader community impact. The age-mixed structure serves as a powerful "social laboratory" where older students refine their leadership and coaching skills, while younger students gain confidence through peer-led modelling and safe, respectful mentorship.

#### SPIRIT Skill Focus

- Valuing people and nature
- Connectedness
- Empathy
- Emotional awareness regulation and communication



## National Curriculum Link and Objectives

- Understand recycling as a way to reduce waste and protect the environment (paper cycle, reuse of fibres).
- Observe and describe the basic process of making recycled paper (pulping, forming sheets, removing water, drying).
- Practice expressive literacy: writing a structured message of gratitude using emotionally appropriate language.
- Strengthen vocabulary related to emotions and sustainability (e.g., gratitude, appreciate, recycle, pulp, care, protect).
- Collaborate in mixed-age teams, giving and receiving help respectfully.

## Real-world STEAM Connection and Problem definition

### Connection (student perspective):

We use paper every day, and throwing it away creates waste. If we recycle paper into something beautiful, we help Earth. If we also choose kind, thoughtful words, we help people feel good inside.

### Problem definition (student perspective, age-specific):

“How can we turn old paper into a new, beautiful card that makes someone feel loved - and also helps Mother Earth by using less waste?”

## Materials at a Glance

### Energiser/framing

- Kinder Egg-style containers (plastic capsule only), baking soda, water (quick metaphor demo)

### Paper making

- Recycled paper scraps (pre-soaked if possible)
- Blender or manual pulping tools
- Trays/tubs for pulp
- Mold and deckle frames
- Sponges/cloths for pressing water out
- Drying area (rack/flat surface + towels)

### Card making + writing

- Cardstock backing / folding card bases
- Glue sticks or white glue
  - Pens/markers/coloured pencils

- Writing prompts + word banks + sentence stems
- Optional decoration: dried flowers/leaves, stamps, wax seal tools (supervised), stickers
- Envelopes or simple wraps

#### Safety + cleanup

- Aprons, towels/wipes, bin bags, table covers.

### Indoor/Outdoor and Classroom layout

#### Indoor (recommended)

- Central meeting spot for intro + sharing
- 3–4 stations around the room:
  1. Teacher station: writing coaching + meaning check
  2. Paper making station (assistant-led): pulp → mold/deckle → sponge press → drying
  3. Draft/edit station: independent writing + peer feedback corner
  4. Decoration/assembly station (assistant-supervised): layout, glue, natural decoration
- Drying zone clearly labelled “Wet Paper - Do Not Touch.

### Notes on Research-based approach and integration

In this activity, students explore a real-life sustainability challenge - waste paper - through an emotionally meaningful goal: creating a card that communicates genuine appreciation. They begin with a shared metaphor about “inputs and impact” to connect caring words and caring actions to both people and the planet. Then they move through a simple inquiry cycle: noticing how paper behaves in water, learning why fibres can be reused, and testing how pressing and drying changes the strength of their sheet.

As they design and build their recycled paper, students make small adjustments based on what they observe (too wet, too thin, too uneven), mirroring a child-friendly research process: observe → try → improve. Literacy is integrated as a purposeful tool: students draft, revise, and choose words that match the feelings they want to communicate. The mixed-age structure strengthens connectedness through mentoring, shared responsibility, and respectful collaboration.

## Lesson Flow Overview (linked to details below)

| Stage | Title                                                      | Brief Description                                                                                                                                                               | SPIRIT Skills                                                                                                                                                 | Duration        | Link to Details                                                               |
|-------|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------|
| 1st   | <b>Framing: “What we give has impact”</b>                  | A short symbolic energiser introduces the idea that words/actions affect people “inside” and choices affect Earth. Students connect this to mothers/guardians and Mother Earth. | <ul style="list-style-type: none"> <li>• Emotional awareness, regulation and communication</li> <li>• Empathy</li> <li>• Valuing people and nature</li> </ul> | 10 minutes.     | <a href="#">STAGE 1 – Framing: “What we give has impact”</a>                  |
| 2nd   | <b>Plan the message</b>                                    | Students brainstorm what they truly appreciate, use a word bank to choose feeling words, and draft a gratitude message that is kind, specific, and respectful.                  | <ul style="list-style-type: none"> <li>• Emotional awareness, regulation and communication</li> <li>• Empathy</li> </ul>                                      | 10 - 15 minutes | <a href="#">STAGE 2 – Plan the message</a>                                    |
| 3rd   | <b>Station Rotation I: Make the paper + refine writing</b> | Students rotate through paper making (pulp → mold/deckle → press → dry) and writing refinement. Older students mentor younger peers                                             | <ul style="list-style-type: none"> <li>• Valuing people and nature</li> <li>• Connectedness</li> </ul>                                                        | 30 - 40 minutes | <a href="#">STAGE 3 – Station Rotation I: Make the paper + refine writing</a> |
| 4th   | <b>Station Rotation II Assemble and decorate</b>           | Students assemble their cards using recycled paper, add natural/eco-friendly decoration, and ensure the design matches the feeling/message.                                     | <ul style="list-style-type: none"> <li>• Empathy</li> <li>• Valuing people and nature</li> <li>• Connectedness</li> </ul>                                     | 30 - 40 minutes | <a href="#">STAGE 4 – Station Rotation II: Assemble and decorate</a>          |

|     |                                  |                                                                                                                       |                                                                                                                                                   |                 |                                                      |
|-----|----------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------|
| 5th | <b>Share, reflect, and close</b> | Students share in pairs/small group, reflect on caring for people and Earth, and name one action they will take next. | <ul style="list-style-type: none"> <li>• Connectedness</li> <li>• Emotional awareness, regulation and communication</li> <li>• Empathy</li> </ul> | 10 - 15 minutes | <b>STAGE 5 –</b><br><b>Share, reflect, and close</b> |
|-----|----------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------|

### Tips and Tricks for dealing with challenges (for the whole STEAM program)

- Mixed-age differences: Pair older students as “paper mentors” and “word coaches.” Rotate helpers so it stays fair.
- Paper drying time: Pre-dry some sheets in advance as backup for assembly and let student-made sheets dry for a later “swap-in” if needed.
- Mess management: Contain pulp station with trays + table covers; assign a rotating “Earth Helper” to manage wipes and water.
- Emotional sensitivity: Allow private writing; sharing can be optional or done in pairs only.
- Overwhelm with decoration: Offer “choose 2 decorations only” to keep it meaningful and manageable.

### Difficulty level tailoring notes

- **Beginner learners:** Provide fill-in-the-blank card templates and allow drawing + dictation.
- **Intermediate:** Require 1–2 emotion words + one specific example (“Thank you for...”).
- **Advanced learners:** Add a short “promise line” (one action they’ll take to care for Earth or help at home).

### STEAM Program Debriefing and Reflection Questions

- What did you learn about how paper can be reused?
- What did you learn about choosing words that affect how someone feels inside?
- How did someone help you today - and how did that feel?
- How does making a gift from waste show care for Mother Earth?
- What is one caring action you want to do next?

### 3.3.2. Stage details and Activities Flow

#### STAGE 1 – Framing: “What we give has impact”

##### How does this develop particular SPIRIT skills

- Builds emotional awareness and communication by naming how words and actions can affect someone’s feelings inside
- Strengthens empathy by helping students imagine what a mother/guardian might feel when receiving thoughtful words
- Develops valuing people and nature by linking caring choices (recycling) to real impact on Mother Earth.

##### What do we want to achieve regarding SPIRIT skill development (student understanding and/or behaviour)?

As a result of this activity, students will be able to:

- Emotional awareness/communication: name one feeling that kind words can create (e.g., loved, proud, calm).
- Empathy: explain what they want their mother/guardian to feel when reading the card.
- Valuing people and nature: name one way recycling paper helps Earth.

##### Academic/Curriculum Objective connection

Introduces cause-effect thinking for both emotions (social input → emotional impact) and sustainability (waste → environmental impact).

##### Materials and tools needed for implementation

Kinder capsule demo materials, “Inside–Input–Impact” visual, emotion word cards.

##### Preparation notes

Keep energiser short and symbolic (not the main event). Use concrete daily examples.

##### Guided Questions

- “What happens inside a person when they hear kind words?”
- “What happens to Earth when we throw paper away?”
- “What could we give today that helps both people and Earth?”

##### Stage Debriefing Questions (Optional)

- “Why should we think before we speak - or before we throw things away?”

##### Tips and Tricks for dealing with stage challenges

- **Challenge:** Metaphor feels abstract for younger students.  
**Tip:** Use everyday examples (“When someone says ‘thank you,’ how do you feel inside?”).
- **Challenge:** Students get stuck on “Mother Earth” idea.  
**Tip:** Make it concrete: “Earth gives us trees, air, water - how can we give back?”

## STAGE 2 – Plan the message (Teacher-led literacy planning)

### How does this develop particular SPIRIT skills

- Strengthens empathy by focusing on the receiver’s feelings and needs
- Develops emotional awareness and communication by choosing emotion words and expressing gratitude clearly and respectfully
- Supports connectedness through idea-sharing and gentle peer feedback (without forcing public performance)

### What do we want to achieve regarding SPIRIT skill development (student understanding and/or behaviour)?

As a result of this activity, students will be able to:

- Emotional awareness/communication: write or dictate a gratitude message using at least one feeling word (e.g., “I feel grateful...”).
- Empathy: include one specific reason that shows they truly noticed the person (“Thank you for helping me when...”).
- Connectedness: offer one supportive comment to a peer (“That sounds kind,” “That will make her happy”).

### Academic/Curriculum Objective connection

Purposeful writing: drafting, vocabulary selection, audience awareness, and tone.

### Materials and tools needed for implementation

Writing templates, word banks, sentence stems, sample card.

### Preparation notes

Differentiate: older students can write independently; younger can draw + dictate.

### Guided Questions

- “What do you want your mother/guardian to feel when reading this?”
- “Which words show real care?”
- “What is one moment you remember that you can thank them for?”

### Stage Debriefing Questions (Optional)

- “Which line feels the most true and meaningful?”

### Tips and Tricks for dealing with stage challenges

- **Challenge:** Students write generic messages (“You’re the best”).  
**Tip:** Prompt specificity: “What did they do that helped you?”
- **Challenge:** Younger students struggle to write.  
**Tip:** Allow drawing + one sentence; older buddy can scribe.

## STAGE 3 – Station Rotation I: Make the paper + refine writing

### How does this develop particular SPIRIT skills

- Develops valuing people & nature by turning waste paper into something useful and beautiful
- Builds connectedness through mixed-age teamwork, mentoring, shared roles, and helping hands
- Supports empathy and emotional communication by improving messages with care (choosing words that protect and uplift)

### What do we want to achieve regarding SPIRIT skill development (student understanding and/or behaviour)?

As a result of this activity, students will be able to:

- Valuing people and nature: explain how recycled paper reduces waste and supports Earth (in simple terms).
- Connectedness: collaborate in a station role (mixer, mold holder, sponge presser, dryer helper) and help someone succeed.
- Emotional awareness/communication: revise one part of their message to sound kinder, clearer, or more meaningful.

### Academic/Curriculum Objective connection

Environmental science (recycling process, fibres + water) + literacy (revision).

### Materials and tools needed for implementation

Paper scraps, pulping tools, tubs, mold/deckle, sponges, drying area; writing drafts.

### Preparation notes

Pre-soak paper scraps if possible. Label station steps visually (1–2–3–4).

### Guided Questions

- “Why is making paper from old paper good for Earth?”
- “What do you notice about the pulp - too thick or too watery?”
- “How can you make your message sound more caring and specific?”

### Stage Debriefing Questions (Optional)

- “What surprised you about making paper?”
- “Did you change any words after thinking more?”

### Tips and Tricks for dealing with stage challenges

- **Challenge:** Paper sheets tear when lifting.  
**Tip:** Use a thicker pulp or a slower lift; support with a buddy’s hands.
- **Challenge:** Waiting time at stations.  
**Tip:** Give clear micro-tasks (wipe area, label sheet, add name tag, revise one sentence).

## STAGE 4 – Station Rotation II: Assemble and decorate the card

### How does this develop particular SPIRIT skills

- Strengthens empathy by designing the card with the recipient in mind (“What would feel special to them?”)
- Develops valuing people & nature through eco-friendly design choices and respectful use of natural materials
- Builds connectedness through sharing tools, giving gentle suggestions, and appreciating each other’s ideas.

### What do we want to achieve regarding SPIRIT skill development (student understanding and/or behaviour)?

As a result of this activity, students will be able to:

- Empathy: explain one design choice that was made to make the recipient feel loved/seen.
- Valuing people and nature: choose materials thoughtfully (recycled base + limited decorations) and avoid waste.
- Connectedness: ask for or offer help respectfully during assembly (gluing, layout, fine-motor tasks).

### Academic/Curriculum Objective connection

Design + literacy presentation: organizing text, readability, layout, and responsible material use.

### Materials and tools needed for implementation

Card bases, glue, markers, dried flowers/leaves, stamps/wax seals (supervised).

### Preparation notes

Set clear limits (“choose 2 decoration elements”) to prevent overwhelm and waste.

### Guided Questions

- “What do you want your card to say and what do you want it to feel like?”
- “How can your decorations show care without using too much?”
- “What would make your mother/guardian smile when they see this?”

### Stage Debriefing Questions (Optional)

- “What part was hardest to make - and how did you solve it kindly?”

### Tips and Tricks for dealing with stage challenges

- **Challenge:** Students overdecorate and lose the message.  
**Tip:** “Message first” rule - read the message aloud, then add 1–2 small details.
- **Challenge:** Fine motor difficulties.  
**Tip:** Provide pre-cut shapes, glue dots, or buddy support.

## STAGE 5 – Sharing, reflection and closure

### How does this develop particular SPIRIT skills

- Strengthens connectedness by sharing work, listening respectfully, and celebrating each other’s effort
- Develops emotional awareness and communication through reflecting on feelings, intention, and word choice
- Deepens empathy by hearing what others created and recognizing different ways of expressing care
- Reinforces valuing people & nature by naming how the gift helps both a person and the planet

### What do we want to achieve regarding SPIRIT skill development (student understanding and/or behaviour)?

As a result of this activity, students will be able to:

- Connectedness: share their work with a partner/small group and respond kindly to someone else’s sharing.
- Emotional awareness/communication: name one feeling they hope their card creates and one feeling they had while making it.
- Empathy: speak about the recipient with respect and care.
- Valuing people and nature: state one action they will take to reduce waste or show care at home.

### Academic/Curriculum Objective connection

Oral expression + reflection + consolidation of environmental science and literacy learning.

### Materials and tools needed for implementation

Reflection prompts, finished cards, envelopes/wraps, sentence stems.

### Preparation notes

Use think–pair–share before group sharing to keep it safe and inclusive.

### Guided Questions

- “What did you put inside your card and why?”
- “How did making paper change how you think about waste?”
- “What is one caring action you want to do next for a person or for Earth?”

### Stage Debriefing Questions (Optional)

- “What is one thing you are grateful for today?”

### Tips and Tricks for dealing with stage challenges

- **Challenge:** Students feel shy about sharing personal gratitude.  
**Tip:** Pair-sharing only; allow “pass” in whole-group.
- **Challenge:** Mixed-age voices dominate.  
**Tip:** Structured turn-taking and a “younger-first” sharing rule.